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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,887	12/05/2001	Werner Gilgen	P/3328-39	2896

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EXAMINER	
PIAZZA CORCORAN, GLADYS JOSEFINA	
ART UNIT	**PAPER NUMBER**
1733	

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	10/006,887	GILGEN, WERNER	
	Examiner	Art Unit	
	Gladys J Piazza Corcoran	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-49* is/are pending in the application.

4a) Of the above claim(s) *33-49* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I (claims 21-32), Species II (figure 2) in the Paper filed December 19, 2003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 33-49 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Groups II and III and Species I, there being no allowable generic or linking claim. Election was made **without** traverse in the Paper filed December 19, 2003. It is noted that Applicant attempted to cancel claims 33-49 within the Response to the Restriction/Election requirement, however such was not entered. It is suggested to file in a separate paper a clean version of the replacement claims with the claims 33-49 cancelled.

Specification

3. The substitute specification filed April 4, 2002 has been entered.

Claim Objections

4. Claim 25 is objected to because of the following informalities: Claim 25, line 2 recites "ofa" which should be --of a--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 27 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 27 recites that the cavities are characterized by a "curved cross-section". There is no support in the original Specification for the cross-section of the cavities in the forming mechanism being curved.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 21-23, 25, 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lang (US Patent No. 5,147,480) in view of Kezuka et al. (US Patent No. 4,614,632).

Lang discloses an apparatus with a forming station (single facer) including a forming mechanism (corrugating rolls 22) operative to produce outwardly projecting cells on a first side of a first paper web, a gluing station including a glue application mechanism (applicator 24) operative to apply glue to the peaks of the outwardly projecting cells on the first side of the first web, a two layer laminating station including a

pressure-feeding mechanism (Pressure roll 28) operative to press a surface of a second paper web onto the glued peaks on the first side of the first paper web, and a receiving station (bridge 32) operative to receive a laminated web exiting from the two-layer laminating station.

It is known in the art of corrugating to provide corrugating rolls that provide an array of projecting cells in order to provide an improved product. Kezuka discloses providing corrugating rolls (rolls 1 and 2) that produce an array of cells on a paper web (column 7, lines 20-25) in an apparatus for forming corrugated board (column 5, lines 60-63) in order to produce a product with little or no directional properties (column 7, lines 54-66). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the apparatus in Lang with a forming mechanism capable of forming an array of cells in order to provide a product with little or no directional properties as shown by Kezuka.

As to claim 22, Lang discloses a first cutting station mechanism (slitter/scorer 52) operative to longitudinally slit a laminated web exiting from the two layer laminating station, a second cutting station including a cutting mechanism (chop knife 54) operative to transversely cut the slit web exiting the first cutting station, and a stacking station including a stacking mechanism (take-off section 56) operative to stack the multi-layer material exiting from the second cutting station. As to claim 23, the forming mechanism (rolls 1 and 2) in Kezuka is operative to produce an array of further cells projecting from a second opposite side of the first paper web and the apparatus in Lang provides a second gluing station (glue machine 34) including a glue application mechanism

(adhesive applicator 36) operative to receive a laminated web exiting the two-layer laminating station and to apply glue to the peaks of the cells on the second side of the first web and a three-layer laminating station (hot and cold traction section 42) including a pressure-feeding mechanism (belt 46) operative to press a surface of a third paper web onto the glued peaks on the second side of the first paper web and to deliver the resulting three-layer web to the receiving station. As to claim 25, the forming mechanism (rolls 1 and 2) in Kezuka comprise of a first rotatable cylinder positioned to engage the first side of the first paper web, and having a plurality of cavities formed on the surface and a second rotatable cylinder positioned to engage the second side of the first web and having an array of projections on the surface thereof which are penetrable into the cavities on the surface of the first cylinder, the cylinders being operative as they rotate to deform a paper web passing there between into the cavities on the first cylinder to form an array of cells projecting form the first side of the paper web. As to claim 29, Kezuka discloses that the forming mechanism is comprised of a first and second rotatable cylinder (rolls 1 and 2) positioned to engage the first and second sides of the paper web, the cylinders each have a plurality of complementary forming regions on the surfaces, each forming region on the first cylinder having a projection that penetrates into a cavity in an opposed forming region on the second cylinder as the cylinders rotate and a cavity that receives a projection on an opposed forming region on the second cylinder as the cylinders rotate, the cylinders being operative as they rotate to deform the web passing there between into the respective cavities in the forming regions of the first and second cylinders to form arrays of inverted cells on the first and

second sides of the web. As to claim 30, Kezuka discloses the forming regions are laid out in a staggered arrangement on the surfaces of the cylinders (column 5, lines 1-12). As to claim 31, Kezuka discloses a mechanism (temperature adjustable shaft) capable of applying heat to the first and second cylinders.

9. Claims 24, 26-28, 31, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lang (US Patent No. 5,147,480) in view of Kezuka et al. (US Patent No. 4,614,632) as applied to claims 21 and 25 above, and further in view of Marschke (US Patent No. 6,006,806).

Lang and Kezuka both disclose the forming mechanism comprising a cylinder that is rotatable and positioned to engage the first side of the web. It is known to provide forming rolls in a corrugating apparatus with cavities and passages for connection to a vacuum source. For example, Marschke discloses forming rolls for a corrugating apparatus comprising a cylinder having an array of cavities (flutes) on the surface, a plurality of internal passages (slots 37) communicating at one end with the cavities and connectable at the other end to a vacuum source, the cylinder being rotatable and positioned to engage the first side of the first web and to permit portions of the first web to be drawn into the cavities by vacuum in the passages to form the array of cells projecting from the web (column 4, lines 21-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the forming mechanism in the apparatus as shown by Lang and Kezuka with passages connectable to a vacuum source in order to maintain the web in contact with the roll as shown by Marschke.

As to claim 27, Kezuka discloses the cavities are characterized by a curved cross-section (dome shaped; column 6, lines 35-40) and are laid out in a staggered arrangement on the surface of the first cylinder (column 5, lines 1-12). As to claims 28 and 31, it is well known in the art to supply heat to corrugating cylinders in order to form the corrugations and to heat the web. It is noted that the corrugating cylinders in Kezuka have a temperature adjustable shaft that is capable of supplying heat. Additionally, Marschke discloses providing a steam supply to heat the corrugating rolls. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the forming cylinders in the apparatus as shown by Lang and Kezuka with a mechanism for supplying heat to the first and second cylinders in order to heat the web as is well known in the art and further exemplified by Marschke.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gladys J Piazza Corcoran whose telephone number is (571) 272-1214. The examiner can normally be reached on M-F 8am-5:30pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gladys JP Corcoran
Examiner
Art Unit 1733

GJPC